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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,287	09/26/2003	Toshio Maesato	P23866	6432
7055	7590	07/07/2004	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			RINEHART, KENNETH	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/670,287

Applicant(s)

MAESATO, TOSHIO

Examiner

Kenneth B Rinehart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-39 is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 and 16-24 is/are rejected.
- 7) ☒ Claim(s) 12, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/30/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION*****Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 13, 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maezato. Maezato discloses a furnace for carbonizing material, said furnace comprising a ... of inner chambers (100, fig. 1), each inner chamber in said group of inner chambers having a lid which can be opened and closed to input material (fig. 5); and an outer chamber having an opening, said outer chamber and said group of inner chambers moving relative to each other so that said group of inner chambers is housed in said outer chamber through said opening (fig. 2), whereby a combustion space is formed between said group of inner chambers and said outer chamber so as to heat each said inner chamber to dry said material by distillation (fig. 1, fig. 4), said outer chamber moves so that said group of inner chambers is housed in said outer chamber (fig. 1, fig. 2), each said inner chamber extends substantially in a horizontal direction, one end of each said inner chamber being closed, another end of each said inner chamber having said lid (fig. 1, fig. 5), one end of said outer chamber is closed and another end of said outer chamber has said opening (fig. 2), a ... of said ... of inner chambers, said outer chamber being movable from one of said ... or ... of inner chambers to another of said ... of ... of inner chambers (fig. 1), a holder that holds an outer cover and said group of inner chambers, said outer cover covering said opening when said group of inner chambers is housed in said outer chamber (215, fig. 1), carrier

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which moves in said inner chamber said material being loaded into said carrier (211, fig. 2), a ... of said carriers are housed in each said inner chamber, (fig. 1, fig. 2), said outer chamber moves in one of a horizontal direction and a vertical direction (fig. 1, fig. 2), an outer surface of said inner chamber is provided with a heat receiving portion which projects outward (103, fig. 3), said material is carbonized whereby gas is generated from said material, said gas being discharged from said inner chamber (fig. 1, fig. 2, Solution), separation apparatus that cools gas discharged from said inner chamber so as to liquefy said discharged gas (300, fig. 3), said separation apparatus having: a first separation pipe that connects with said inner chamber (301, fig. 3); a second separation pipe that connects with said first separation pipe through a joint pipe (303, 305, fig. 3), said discharged gas passing through said second separation pipe after passing through said first separation pipe (fig. 3); and a cooling apparatus that cools said discharged gas in said first and second separation pipes (300, fig. 3), a diameter of said first separation pipe being ... than a diameter of said second separation pipe (fig. 3), a separation apparatus that cools gas discharged from said inner chamber so as to liquefy said discharged gas (300, fig. 3), said separation apparatus having: a first pipe group containing a ... of first separation pipes, each of said first separation pipes connecting with said inner chamber (301, fig. 3) said discharged gas passing through said first separation pipes (301, fig. 3), said separation apparatus further has one connection pipe which connects with said inner chamber (103, fig. 3), said ... of first separation pipes connecting with said inner chamber through said one connection pipe (fig. 3), said ... of said first separation pipes have the same length (fig. 3), and extend in the same direction, one end of said first separation pipes connecting with said one connection pipe (103, fig. 3), another end of said first separation pipes connecting with one joint pipe (305, fig. 3), said separation

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apparatus further has one joint pipe with which said ... of first separation pipes connect to (305, 301, fig. 3); and a second pipe ... of a ... of second separation pipes, said ... of second separation pipes connecting with said one joint pipe (303, fig. 3), said discharged gas passing through said second separation pipes after passing through said first separation pipes, said cooling apparatus cooling said discharged gas in said second separation pipes also (300, 301, 303, fig. 3), a ... of inner chambers, each inner chamber in said group of inner chambers having a lid which can be opened and closed to input said material (fig. 1, fig. 5); an outer chamber having an opening (202, fig. 2); a moving apparatus that moves said outer chamber and said ... of inner chambers relative to each other so that said ... of inner chambers is housed in said outer chamber through said opening to form a combustion space between said ... of inner chambers and said outer chamber so as to heat each said inner chamber to dry said material by distillation (fig. 1, fig. 2), an outer chamber having a first outer lid which can be opened and closed (fig. 5); and a ... of inner chambers, each chamber in said ... of inner chambers having an inner lid which can be opened and closed to input said material (fig. 1), said ... of inner chambers being provided in said outer chamber so that a combustion space is formed between said inner chambers and said outer chamber so as to heat each said inner chamber to dry said material by distillation (fig. 3), said first outer lid being located over said inner lid so as to input said material to said inner chamber (fig. 3), each said lid can separate from each said inner chamber (The apparatus is presently capable of performing this function.) Maezato discloses applicant's invention substantially as claimed with the exception of plurality and groups, one of said plurality of carriers being disposed above another of said plurality of carriers, larger, adjoining first separation pipes in said first pipe group are separated from one another. At the time the

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invention was made it would have been an obvious matter of design choice to a person of ordinary skill in the art to have groups or plurality, one of said plurality of carriers being disposed above another of said plurality of carriers, adjoining first separation pipes in said first pipe group are separated from one another because to provide for a multiplied effect or to change the location of the carriers using a plurality or grouping spacing said pipes is not a matter of invention. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the quantity and location of Maezato or the claimed quantity and locations because both quantities or groupings or locations perform the same function of carbonizing equally well. At the time the invention was made it would have been an obvious matter of design choice to a person of ordinary skill in the art to have larger because applicant has not disclosed that the size provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the size of Maezato or the claimed size because both sizes perform the same function equally well.

Claims 23 and 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over 10-310774. 10-310774 discloses an outer chamber having a first outer lid which can be opened and closed (3, fig. 6); and a ... of inner chambers, each chamber in said ... of inner chambers having an inner lid which can be opened and closed to input said material (1, fig. 6), said ... of inner chambers being provided in said outer chamber so that a combustion space is formed between said inner chambers and said outer chamber so as to heat each said inner chamber to dry said material by distillation (fig. 3), said first outer lid being located over said inner lid so as to input said material to said inner chamber (fig. 1, fig. 2), said outer chamber further has a second outer

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lid which can be opened and closed so as to cool said inner chamber (39, fig. 2).10-310774  
discloses applicant's invention substantially as claimed with the exception of groups. At the time the invention was made it would have been an obvious matter of design choice to a person of ordinary skill in the art to have plurality because to provide for a multiplied effect using a plurality is not a matter of invention. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the quantity of 10-310774 or the claimed quantity because both quantities perform the same function of carbonizing equally well.

#### *Allowable Subject Matter*

Claims 25-39 are allowed.

Claims 12, 14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to furnaces in general: Maezato (7-11255), Hemsath (5119395), Hinger (4361100).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 703-308-1722. The examiner can normally be reached on 7:30 -4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703-308-1935. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KBR

  
KENNETH RINEHART  
PRIMARY EXAMINER